



Erfolg mit GIS



INSPIRE Anforderungen an die GDI-SH

Tag der Geodateninfrastruktur Schleswig-Holstein



Geodateninfrastruktur Schleswig-Holstein



■ Architektur

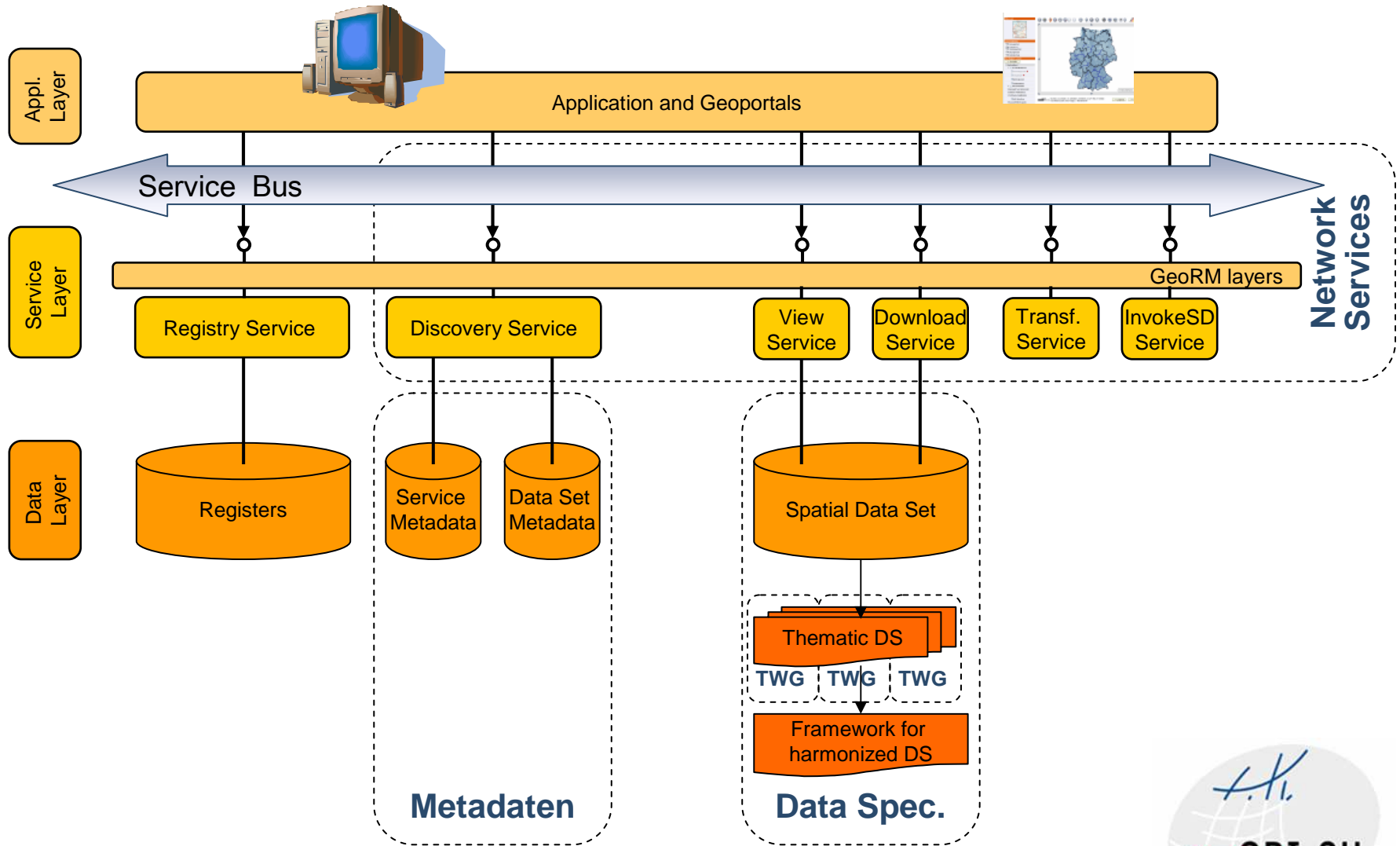
- ✦ Web Dienste
- ✦ eGovernment Integration
- ✦ Mehrsprachigkeit
- ✦ Anforderungen an die Dienstqualität (Quality of Service)

■ Dienstetypen

■ Umsetzung

INSPIRE Architektur Überblick

INSPIRE Anforderungen an die GDI-SH



INSPIRE Struktur (der Dokumente)

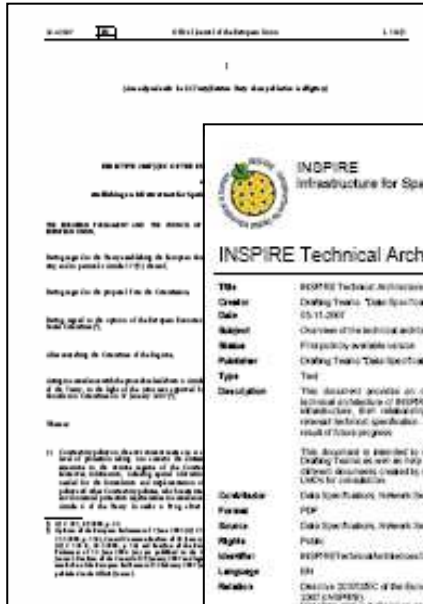
INSPIRE Directive

INSPIRE Technical Architecture Overview

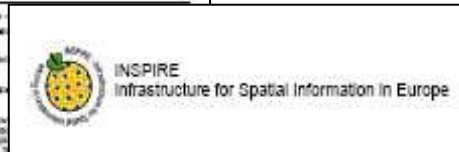
INSPIRE Network Services Architecture

Implementing Rules for Discovery and View Services

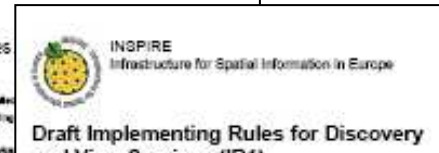
Technical Guidance to implement INSPIRE View Service and INSPIRE Discovery Service



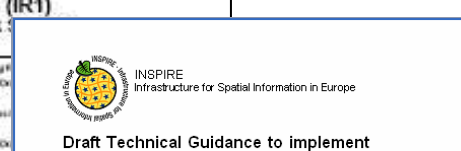
Title	INSPIRE Technical Architecture - Drafting Team's Technical Architecture
Creator	Drafting Team's Technical Architecture
Date	05-11-2007
Subject	Overview of the technical architecture
Status	Final (publicly available version)
Publisher	Drafting Team's Technical Architecture
Type	Text
Description	This document provides an overview of the technical architecture of INSPIRE infrastructure. It is intended as a general technical specification. It is the result of a long process.
Contributor	This document is intended to be developed in the context of the INSPIRE infrastructure. It is intended to be developed in the context of the INSPIRE infrastructure. It is intended to be developed in the context of the INSPIRE infrastructure.
Format	PDF
Source	INSPIRE Technical Architecture
Rights	Open access to registered users
Identifier	INSPIRE Technical Architecture
Language	EN
Relation	INSPIRE Technical Architecture
Coverage	INSPIRE Technical Architecture



Title	INSPIRE Network Services
Creator	Network Services Drafting Team
Date	11-12-2007
Subject	INSPIRE Network Services
Status	Draft
Publisher	Network Services Drafting Team
Type	Text
Description	Draft Network Services Architecture
Format	MS Word
Source	Network Services Drafting Team
Rights	Open access to registered users
Identifier	INSPIRE Network Services
Language	EN
Relation	Not applicable
Coverage	Project Services



Title	Draft Implementing Rules for Discovery and View Services (IRT)
Creator	Drafting Team "Network Services"
Date	11-12-2007
Subject	Implementing Rules for Discovery and View Services
Status	Draft
Publisher	Network Services Drafting Team
Type	Text
Description	This document defines the implementing rules for the INSPIRE View and Discovery Services.
Format	MS Word
Source	Network Services Drafting Team
Rights	Open access to registered users
Identifier	INSPIRE Network Services
Language	EN
Relation	Not applicable
Coverage	Project Services

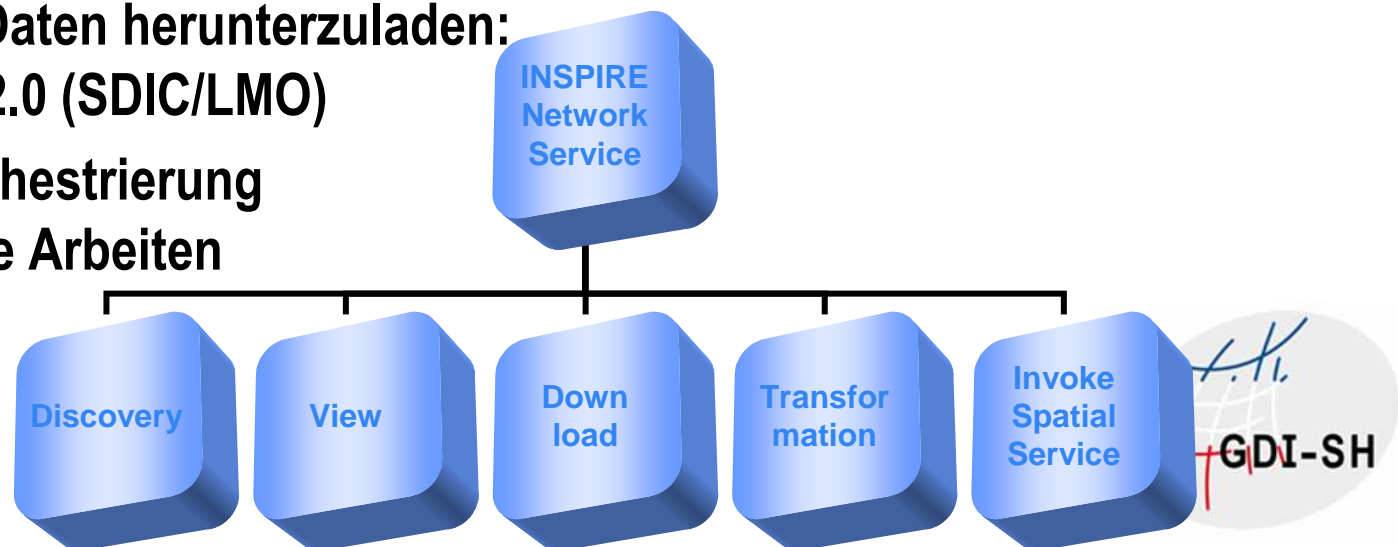


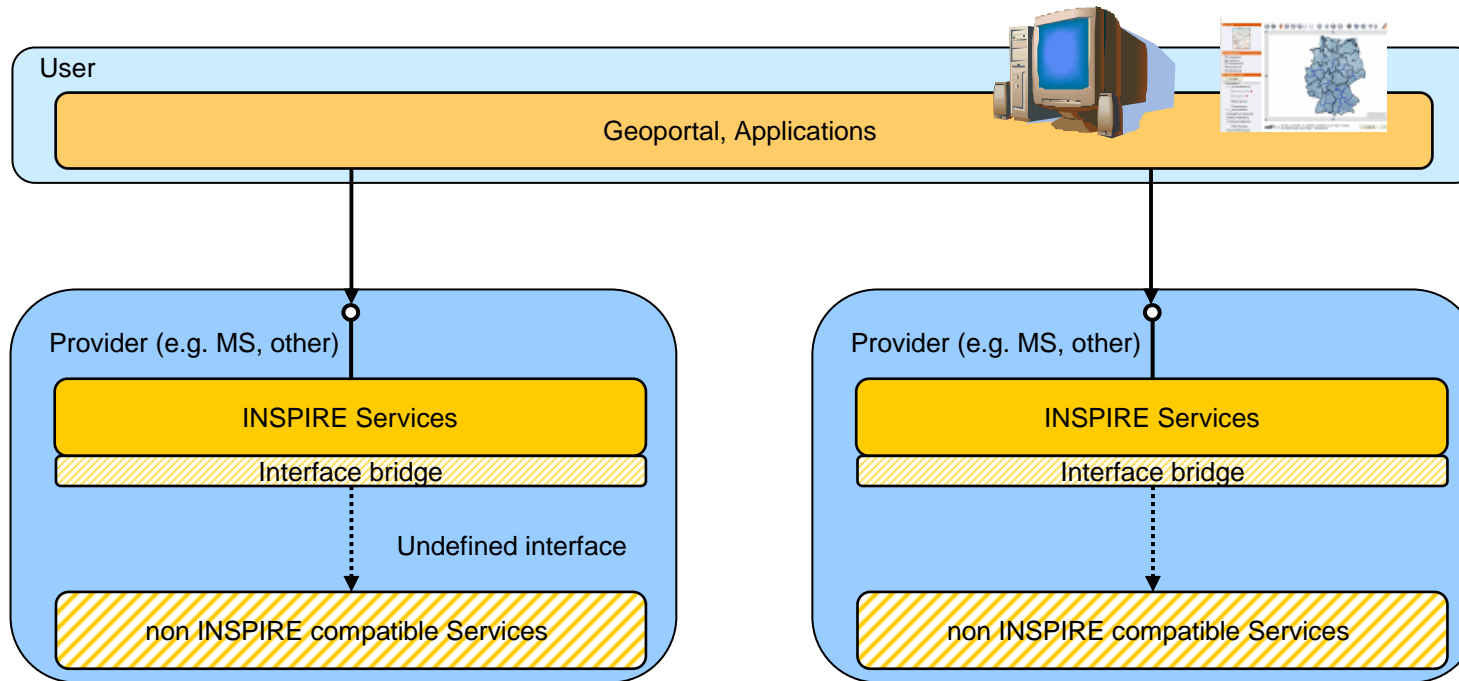
Title	Draft Technical Guidance to implement INSPIRE View Services (version 0.3)
Creator	Drafting Team "Network Services"
Date	2008-01-17
Subject	Implementing Rules for Discovery and View Services
Status	Draft
Publisher	Network Services Drafting Team
Type	Text
Description	This document defines how to implement INSPIRE View Services according to the INSPIRE Implementing Rules for Discovery and View Services.
Format	MS Word
Source	Network Services Drafting Team
Rights	Open access to registered users
Identifier	Draft Technical Guidance View Services v0.3.doc
Language	EN
Relation	Not applicable
Coverage	Project Services

INSPIRE Anforderung



- **Architektur der Netzdienste: Version 1.0**
- **Such- und Darstellungsdienste: Version 1.0**
 - ★ **Durch SDIC/LMOs kommentiert (ca. 1000 Kommentare)**
 - ★ **Gemeinsamer Workshop mit SDIC/LMOs zu Kommentaren**
 - ★ **Umsetzungs-Direktive der EU liegt seit November 2008 vor**
 - ★ **Aktuell Übersetzung ins Deutsche in Abstimmung**
- **Transformationsdienste: IR & Technical Guidance Version 2.0 (SDIC/LMO)**
- **Dienst um Daten herunterzuladen: IR Version 2.0 (SDIC/LMO)**
- **Dienste Orchestrierung**
Bisher keine Arbeiten

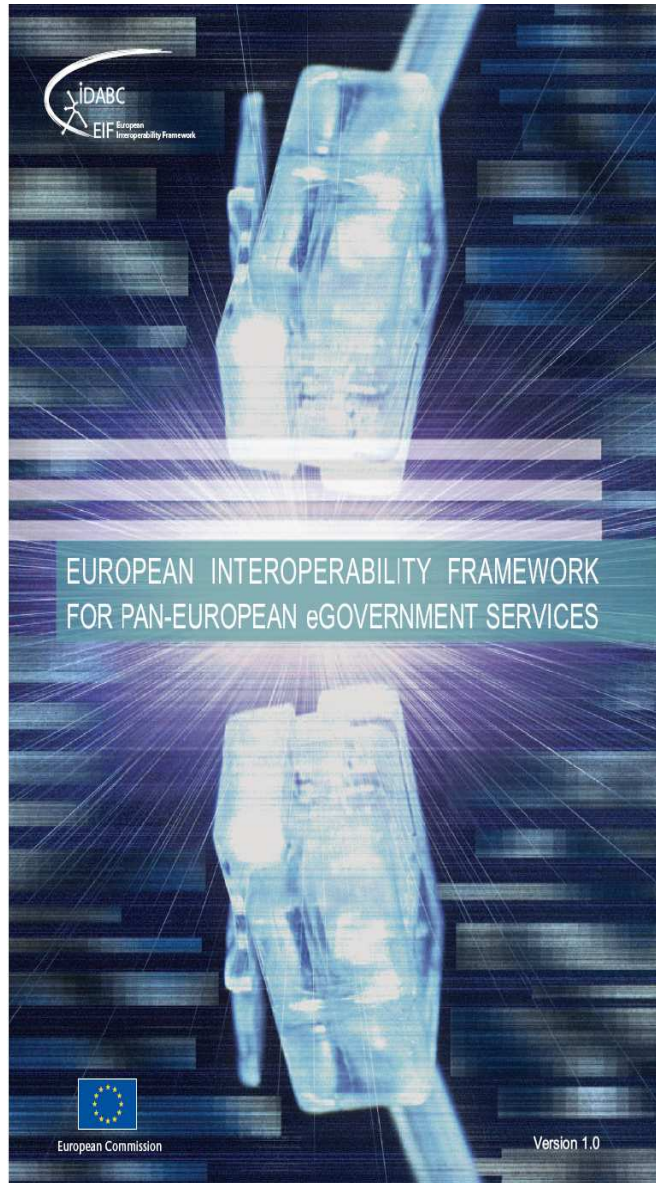




- SOAP ist Standard IT und unterstützt daher nachhaltig die Specs
- Einfache Integration in Entwicklungsumgebungen
- Direkte und vollständige Integration mit verschiedenen Dienste Umgebungen (WSDL, UDDI, ...)
- GeoRM durch SOAP “envelope data” unterstützt
- SOAP für INSPIRE Netzdienste durch JRC
 - ✦ INSPIRE SOAP Framework
 - ✦ Umsetzung für einzelne Dienstetypen

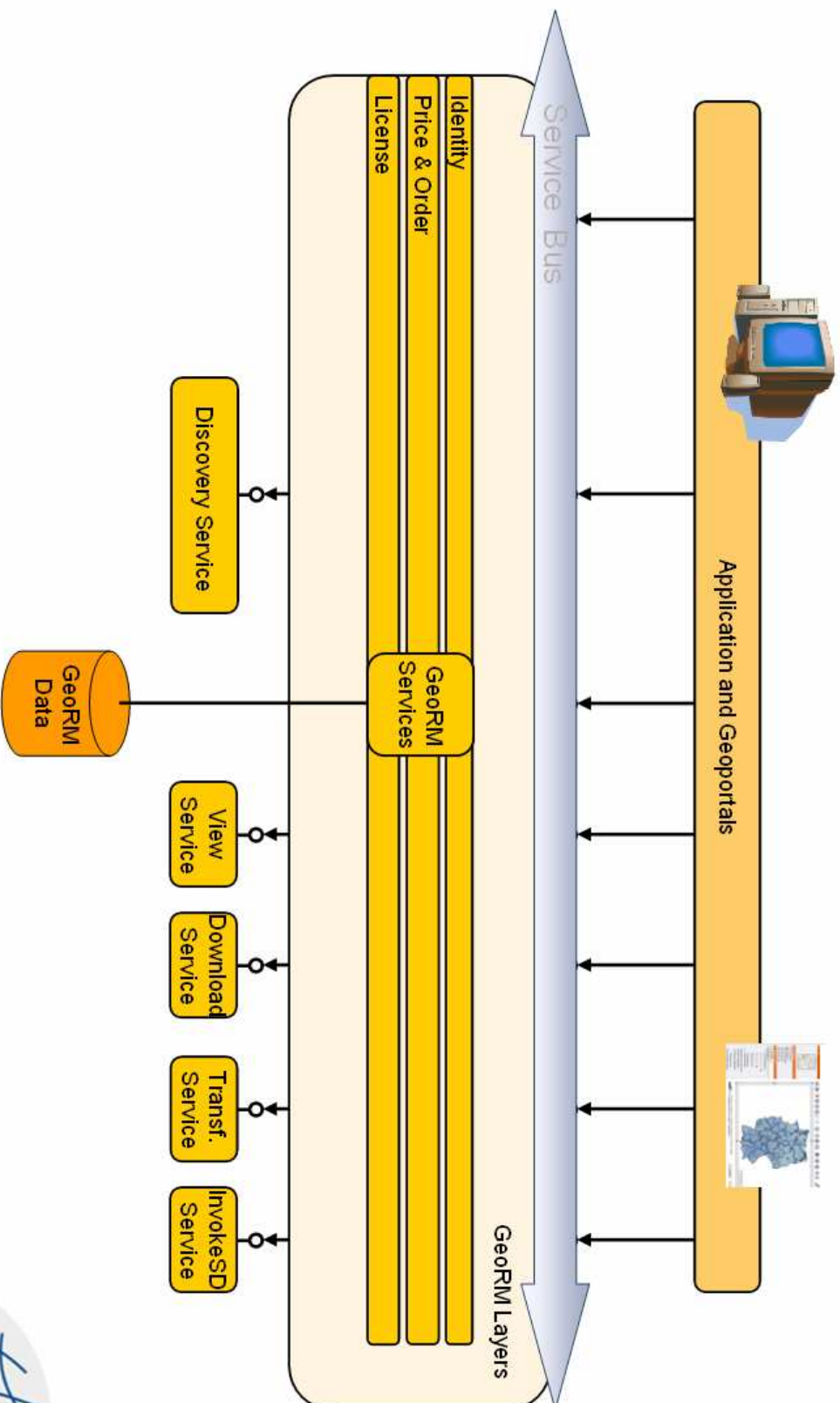
INSPIRE Anforderungen an die GDI-SH

```
<soapenv:Envelope xmlns:soapenv= ...>
  <soapenv:Header>
    <inspire:licence xmlns:inspire='http://...'
      soapenv:mustUnderstand=1>
      <rightsManagementKey>... </rightsManagementKey>
    </inspire:licence>
  </soapenv:Header>
  <soapenv:Body>
    // service call
  </soapenv:Body>
</soapenv:Envelope>
```



- **INSPIRE fordert Integration in nationale eGovernment Umgebungen**
- **Basiert auf European Interoperability Framework (EIF)**
- **EIF liefert Standards und Richtlinien für die Umsetzung nationaler interoperabler eGovernment Frameworks**

Geo Rechte Management (GeoRM)



INSPIRE Anforderungen an die GDI-SH

```
<soapenv:Envelope xmlns:soapenv= ...>
  <soapenv:Header>
    <inspire:licence xmlns:inspire=''http://...''
      soapenv:mustUnderstand=1>
      <rightsManagementKey>... </rightsManagementKey>
    </inspire:licence>
  </soapenv:Header>
  <soapenv:Body>
    // service call
  </soapenv:Body>
</soapenv:Envelope>
```

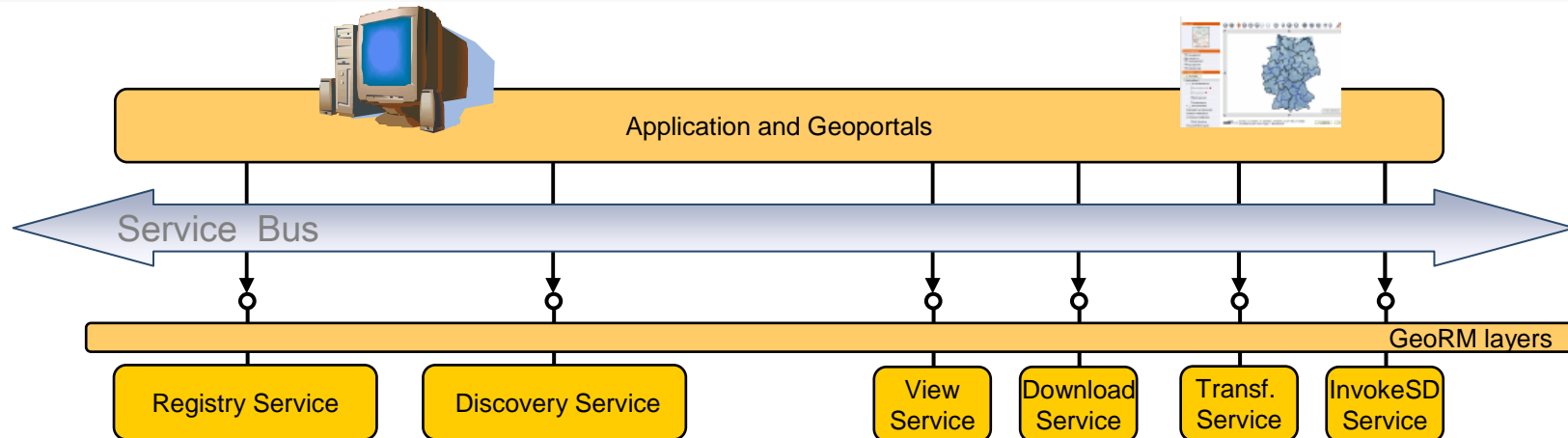
- **Keine verpflichtende Unterstützung einer einheitlichen Sprache!**
- **Empfehlung (nach EIF) mindestens Englisch an wichtigen Stellen im Dienst zu unterstützen**
- **Dienste müssen Metadaten über die unterstützten Sprachen geben (ISO language codes)**
- **Standardverhalten eines Dienstes ist die “default language”**
- **Dienste unterstützen optional einen “language code”, um Klienten die Möglichkeit zu bieten, Dienste in ihrer Sprache anzufordern.**
- **Betrachtet werden**
 - ✦ **Dokumente (metadata, capabilities, feature info, error messages, ...)**
 - ✦ **Keine Karten**

- Die Direktive fordert minimale Kriterien, um die Qualität der INSPIRE Dienste sicher zu stellen
 - ✦ Es sollten mögl. wenig Kenndaten sein.
 - ✦ Sie sollten möglichst einfach zu messen sein.

- INSPIRE Architektur definiert dazu Kriterienkategorien
 - ✦ Performancekriterien
 - Antwortzeit in Abhängigkeit von der Last (performance)
 - Mögliche Last (capacity)

 - ✦ Betriebskriterien
 - Verfügbarkeit (availability)
 - Zuverlässigkeit (reliability)

 - ✦ Weitere Kriterien
 - Sicherheit (security)
 - Konformität (compliance)



- ***Discovery (suchen), View (darstellen), Download (herunterladen), Transformation (transformieren) and Invoke Spatial Data Service (orchestrieren)*** werden durch die Direktive gefordert
- ***Registry Service (registrieren)*** ist ein zusätzlicher Dienste Typ, der benötigt wird, um eine interoperable GDI zu betreiben
- **Dienste sollen ab 2010 als nationale Netzdienste verfügbar sein**

Discovery Service (suchen)

- **INSPIRE Discovery Service basiert auf OGC CSW 2.0.2 AP ISO 1.0**
- **Suchen, Bewerten und Nutzen von Daten und Diensten über ihre Metadaten**
- **Das Metadatenmodell ist durch die Durchführungsbestimmung für Metadaten definiert.**
- **QoS: 250 Metadatenätze in 3 s; 100 Zugriffe in 3 s**

INSPIRE Anforderungen an die GDI-SH

<u>Functions</u>		
Get Service Metadata	Provides information about the service	M
Get Information Model Metadata	Provides description of the information model supported by the Discovery service	M
Discover metadata	Requests metadata based on a query statement	M
Get Metadata	Retrieves metadata from a result set, based on ID	M
Get Domain Metadata	Provides the domain value of a metadata element	O
Publish Metadata	To push metadata into a discovery service datastore	(1)
Collect Metadata	To pull metadata from a discovery service datastore	(1)

(1) One of these two functions is mandatory

View Service (darstellen)

- **INSPIRE View Service basiert auf WMS 1.3; ISO 19128 mit weiteren verpflichtenden Attributen**
 - ✦ **Contact Information: address, email, phone (email bevorzugt)**
 - ✦ **Layer name & title: mandatory**
 - ✦ **Coordinate Reference Systems: mindestens eins mandatory**
 - ✦ **Legend: legend URL mandatory, format PNG oder HTML**
 - ✦ **Metadata: metadata URL, format text/xml (ISO19139)**
 - ✦ **Scale range: Angabe von min und max scale sind empfohlen**

- **QoS: 470 Kb Bild (800x600, 8bits) in 5 s; 20 Zugriffe pro Sekunde**

INSPIRE Anforderungen an die GDI-SH

<u>Functions</u>		
Get Service Metadata	Provides information about the service	M
Get Map	Provides a map (image spatially referenced) containing information coming from the datasets	M
Get Feature Information	Provides information about features at a selected point	O

INSPIRE Dienste im GIS Portal

Download

Transformation

View

ungen an die GDI-SH

NAS / NBA

WFS / FE
GML 3

GML, Shape,
DXF, ...

WMS

AED SICAD

GIS Portal

Discovery

AED SICAD

WebServiceSecurityExtension

GeoRM

ArcGIS
ESRI
ArcGIS Server

AED SICAD
3A Server Public

AED SICAD
OrderService

AED SICAD
PlotService

FME
Transformation

OGC
Open Geospatial Consortium
WMS, WFS



- **Jetzt für INSPIRE vorbereiten!**
- **Daher schon heute die passenden Werkzeuge und Unterstützung für INSPIRE**

INSPIRE Anforderungen an die GDI-SH

- ★ **Geoserver Schleswig-Holstein Hamburg**
- ★ **Hamburg Port Authority**
- ★ **Hansestadt Lübeck**

- ★ **Geoserver & Geobasisdatenportal NRW**
- ★ **Geobroker Brandenburg**
- ★ **Thüringen**
- ★ **Absicherung GDI Berlin, NRW, SH, HH**
- ★ **Viele weitere kommunale Portale**



INSPIRE Anforderungen an die GDI-SH

The screenshot displays the ATKIS GIS Portal interface. At the top, the AED SICAD logo is on the left, and the text "ATKIS®-DLM, © LVerMA-SH 2006" and "GIS Portal Version 3.4.1" is in the center. A globe icon with "ATKIS" is on the right. Below the header, a tab bar shows "ATKIS DLM 50", "Lübeck ALK", and "TK25/DGK5". A menu bar includes "Fenster", "Messwerte", "Koordinaten", and "Hilfe". A toolbar with various navigation icons is positioned above the map. The map itself shows the Hansestadt Lübeck area with various waterways and infrastructure. Labels include "B206", "B75", "L92", "L182", "B207", "Hansestadt Lübeck", "Wakenitz", "Zuflutungskanal", "Stadt-Trave", "Stadtgraben", "Ake Trave", "Kanal-Trave", "Elbe-Lübeck-Kanal", and "Mönmarker Landgraben". A scale bar at the bottom left indicates "0" to "1.354 Meter". The bottom right corner shows the coordinates "X: 4415727,9 Y: 5970240,1" and a "Lokales Intranet" button.

INSPIRE Anforderungen an die GDI-SH

The screenshot displays the GIS Portal interface for Hansestadt Lübeck. The interface includes a top navigation bar with the AED SICAD logo and the text 'ATKIS®-DLM, © LVerMA-SH 2006 GIS Portal Version 3.4.1'. Below this, the main window title is 'Hansestadt Lübeck GIS Portal Version 3.4.1'. The interface is divided into several sections:

- Left Panel:** A menu with options: 'Gib Info zu...', 'Suche...', 'Gehe zu...', 'Erzeuge HTML...', and 'Sonstiges...'. Below the menu is a scale bar and the text 'Maßstab: 1: 1000'.
- Map Area:** A central map showing building footprints with various cadastral numbers (e.g., 590, 91, 505, 90, 37, 448, 38, 736, 41, 92, 4, 92, 6, 92, 5, 623, 93, 96, 6, 624, 96, 598, 96, 599, 96, 524, 96, 525, 96, 317, 22, 334, 22, 318). A scale bar indicates 40 meters.
- Right Panel:** A legend with the following items:
 - TOP
 - ALK_Navi
 - ALK
 - Luftbild Mai
- Bottom Bar:** A status bar with the text 'Lokales Intranet' and a small globe icon.

INSPIRE Anforderungen an die GDI-SH

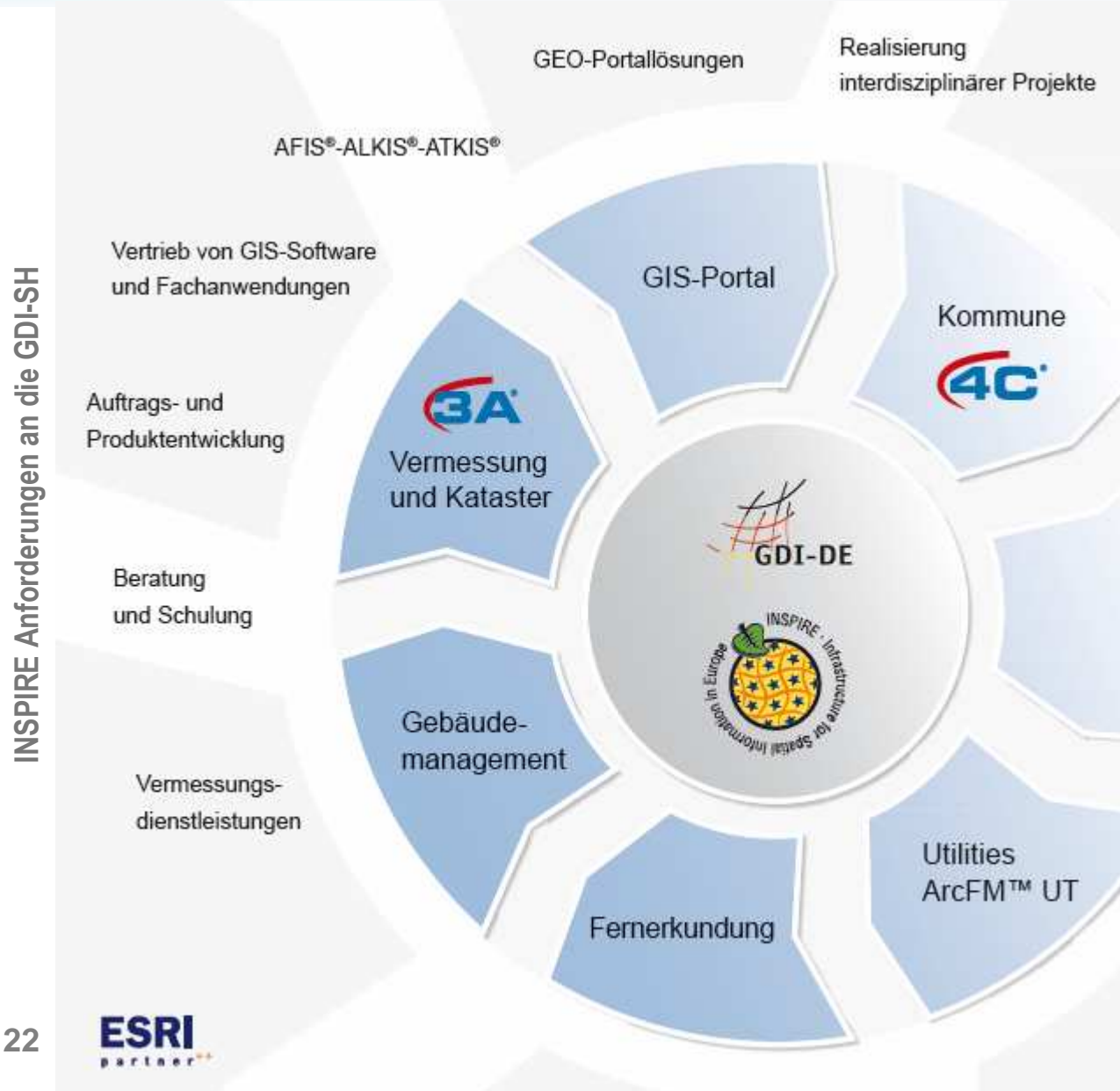
The screenshot displays the AED SICAD GIS Portal interface for Hansestadt Lübeck. The interface is structured as follows:

- Top Bar:** Contains the AED SICAD logo, the text "ATKIS®-DLM, © LVerMA-SH 2006 GIS Portal Version 3.4.1", and the ATKIS logo.
- Second Bar:** Contains the AED SICAD logo, the text "Hansestadt Lübeck GIS Portal Version 3.4.1", and the Lübeck coat of arms.
- Third Bar:** Contains the AED SICAD logo, the text "Hansestadt Lübeck GIS Portal Version 3.4.1", and the Lübeck coat of arms.
- Left Panel:** A vertical menu with options: "Gib Info zu...", "Suche...", "Gehe zu...", "Erzeuge HTML...", and "Sonstiges...".
- Main Map Area:** Displays an aerial photograph with overlaid cadastral data. The map includes a toolbar with navigation icons and a status bar at the bottom showing "Maßstab: 1: 1000" and coordinates "X: 4413850,6 Y: 5969979,3".
- Right Panel:** A legend window with the following layers:
 - TOP
 - ALK_Navi
 - ALK
 - Luftbild Mai
- Bottom Bar:** Includes a "Lokales Intranet" icon.

■ AED-SICAD Infostand im Foyer (Nr. 9)!

■ Im Web unter

- ★ <http://www.ec-gis.org/inspire/>
- ★ <http://www.gdi-de.org/de/INSPIRE>
- ★ <http://de.wikipedia.org/wiki/INSPIRE>
- ★ <http://www.thegigasforum.eu/>
- ★ <http://www.eu-orchestra.org/>
- ★ <http://www.aed-sicad.de/>



Vielen Dank für Ihr Interesse!

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